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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/809,932

03/26/2004

Reinhard Bruch

9A-93065

6430

26686

7590

11/07/2006

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EXAMINER

HELLNER, MARK

ART UNIT

PAPER NUMBER

3663

DATE MAILED: 11/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/809,932

Applicant(s)

BRUCH ET AL.

Examiner

Mark Hellner

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 3,9 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-10, 12-17, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rairoux et al (reference AP on PTO form 1449) in view of Mourou et al. (5,235,606)

Figure 2 of Rairoux et al discloses a system for determining the constituents of a sample volume of the atmosphere, the system comprising: a femtosecond laser radiation source (Titanium-Sapphire femtosecond laser system) configured to emit laser radiation through a sample volume of the atmosphere; an optical unit (40 cm f/3 lens) configured to receive light backscattered from the sample volume; and a detection and analysis unit (spectrometer) coupled to the optical unit for analyzing the spectral signature of the sample volume.

The difference between claim 1 and Rairoux et al is that the source emit terawatt levels of radiation.

Column 1, line 38 of Mourou et al is cited to show that Ti:Sapphire sources of ultrashort pulses were capable of Terawatt power at the time of the present application.

It would have been obvious to have used terawatt power in the invention of Rairoux et al, when seeking to improve signal resolution, thus producing claim 1.

Claims 12 and 22 are rejected for the reasons applied to claim 1.

The fiber cable recited by claim 10 is an inherent part of the spectrometer disclosed by Rairoux et al.

Claims 4 and 10 recite elements that are a part of a volume of atmosphere.

Claims 5-7 recite the properties disclosed by the CPA of Mourou et al.

Claim 8 is met by page 575 of Rairoux et al which states that their laser operates at 790nm.

Claims 13-17 and 19 are rejected for the reasons applied to claims 4-8 and 10.

Claims 11, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rairoux et al and Mourou et al as applied to claim 1 above, and further in view of McGrew

The limitation of claims 11, 20 and 22 reads on the detection of a complex molecule.

McGrew et al teaches that it was known at the time of the present application to use pulsed laser sources to identify molecules.

It would have been obvious to have applied the teachings of McGrew et al to the device of Mourou et al when seeking to expand its detection ability, thus producing claims 11, 20 and 21.

Claims 3, 9 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art cited shows the known properties of Chirped Pulse Amplifier based light sources.

Any inquiry concerning this communication should be directed to Mark Hellner at telephone number 571 272 6981.

Mark Hellner

Primary Examiner

AU 3663

A handwritten signature in black ink, appearing to read "Mark Hellner", with a stylized, cursive script.